

NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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TABLE OF CONTENTS

Local Use of Penicillin	1	Litter Hoists for LST-s.....	10
Initiation of Naval Research	4	A Substitute for Sunburn Cream.....	12
Penicillin in Yaws	4	Oil and Water Resistant Inks.....	12
Skin Sensitivity to Benzoin	6	Field Photographic Units.....	13
Myasthenia Gravis	6	Mobile Dental Units.....	13
Perforating Wounds of Abdomen	7	Primary Atypical Pneumonia	14
Debridement of Wounds	8	Drug Eruptions.....	18
Refrigerated Skin Grafts.....	9	VD Control Reports.....	19
Transient Hypertension	10	Medical Training Films.....	20
Errors in Blood Groups.....	10	Delivery of Whole Blood.....	24

Form Letters:

Suspension of Hospitalization Reimbursement.....	BuMed.....	25
Disposition of Hospitalized Officer Candidates.....	BuPers.....	26
Training of Dental Technicians	BuMed.....	27
Identification for Hospital Ship Crews	BuPers.....	28
Filarial Personnel - Unlimited Duty Classification.....	JointLtr.....	29
Reports on Penicillin Therapy	BuMed.....	30
Discharge Policy of Limited-Duty Personnel.....	JointLtr.....	31
Redesignation of Naval Hospital, Camp Lejeune	SecNav.....	31
Sulfonamides in Gonorrhea and Chancroid.....	BuMed.....	32

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The Local Use of Penicillin: The following item has been contributed by Dr. John S. Lockwood, Chief, Division of Surgery, Committee on Medical Research of the OSRD:

Penicillin is used locally for one or more of the following reasons: (1) to introduce the drug into closed cavities and spaces in the body to which it is not efficiently transported by systemic routes, (2) to obtain higher concentrations in wound fluids than can be obtained by systemic administration, and (3) to economize on penicillin in treating localized lesions.

When penicillin is administered systemically, it is not efficiently transported through membranous barriers; it appears only in limited concentrations in spinal, pleural and peritoneal fluids and in pus. While in some instances infections of meninges, pleurae and soft tissues have been successfully treated by systemic administration alone, it is recommended that in such cases topical therapy be combined with systemic therapy whenever feasible.

In suppurative meningitis 5 to 10 c.c. of solution containing 1,000 units/c.c. may be injected daily following withdrawal of spinal fluid. In empyema, the chest fluid is withdrawn daily or every two days with careful control of pressure, and approximately 10 c.c. of solution containing 1,000 to 2,000 units of penicillin per c.c. are injected. A similar procedure should be followed in the treatment of suppurative arthritis. In all of these conditions the concurrent parenteral administration of penicillin will be desirable as long as there is any continuing evidence of a systemic reaction to the infection. Surgical intervention may often be postponed until specific problems arise which can be met only by surgical methods. For example, surgical treatment will be required for a suppurative mastoid infection initially responsible for the meningitis, or for an empyema containing excessive quantities of fibrin or multiple loculations out of reach of the aspirating needle.

Following successful local therapy in cases of these types, it is not unusual for cultures to be sterile after two or three treatments; however, the injections should be repeated until formation of exudate has ceased.

The value of locally administered penicillin in preventing infections in accidental wounds may be seriously questioned. Development of infection is determined largely by the adequacy of surgical treatment in each case rather than by bacteriological factors capable of being influenced by penicillin. Since penicillin is non-persistent in wounds, it must be given repeatedly at brief intervals through indwelling tubes in order to maintain the desired concentration. Its effect being bacteriostatic rather than bactericidal, such treatments would have to be continued for several days if even theoretical considerations were to be satisfied. As yet there is no sound indication for topical use of penicillin in wound prophylaxis.

If an invasive infection develops, again principal reliance must be placed on systemic therapy since topically applied drugs will not come in contact

with deeply-placed organisms. Therefore, in established infections of wounds and bone, there is only a limited range of usefulness for locally applied penicillin, sometimes as an adjunct to systemic therapy, and always in conjunction with aspiration or open drainage.

In cases of well localized and accessible abscesses of soft tissues, brain or bone, it is often possible to empty the cavity by aspiration and to re-inject a few c.c. of penicillin solution. Localized furuncles, brain abscesses, and even subperiosteal abscesses have been successfully treated in this way, and the need for later surgery has been obviated. Sound policy dictates that each individual case must be handled as a separate problem; local use of penicillin will always have some influence on susceptible organisms in localized foci of suppuration, but it will not necessarily be curative without concomitant surgical drainage.

After surgical drainage and debridement of abscesses of bone, mastoids, fingers, tendon sheaths, and other soft parts, the local instillation of penicillin solution (500 units per c.c.) into the wound every four to six hours for three to five days through small, soft, indwelling catheters may be of value in encouraging deposition of healthy non-infected granulation tissue. The writer has been favorably impressed with the value of such treatment in the post-operative management of thoroughly debrided infections of the feet of diabetics. In these localized infections which have been drained, the locally-applied penicillin is directed against the organisms which remain on the wound following removal of the infected fibrin and slough, and the healthy leukocytes which enter the exudate are aided by the penicillin in destroying the remaining bacteria. These wounds may be subjected to early secondary closure or skin grafting once it is apparent that tissue invasion has ceased and all of the slough has been extruded.

Dilute penicillin solution has been used with great success in the local treatment of conjunctivitis when the infection has been caused by Gram-positive cocci or gonococci. Secretion is wiped away and a few drops of solution containing 250 to 500 units/c.c. are instilled every one or two hours into the conjunctival sac. Systemic treatment is of little value in these cases.

Staphylococci and hemolytic streptococci can be caused to disappear from granulating wound surfaces in preparation for skin grafting by applying every few hours dressings soaked in solution containing 100 to 250 units/c.c. If there is any evidence of cellulitis, penicillin should be administered systemically as well.

A limiting factor in the practical usefulness of penicillin in the local treatment of these open infected wounds is the need for frequent re-application of the solution. Eventually it should be possible to include penicillin in an ointment which will slowly liberate it into wound fluids, thus

obviating the necessity for frequent applications of a solution. However, none of the ointments yet described has been given sufficient clinical trial to justify an unqualified recommendation, and for the time being the use of saline solutions of the drug is preferable. Penicillin powder, and solutions containing more than 2,000 units/c.c. are likely to be irritating and painful, and there is no evidence that such concentrated preparations are more efficacious than the solutions here recommended.

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Initiation of Naval Research: Rarely in the future will the solitary worker sprout a really new idea; more rarely still can he develop it unaided. To bring an idea to the stage of use an articulated organization is necessary.

Naval research is so restricted in its legitimate objectives that it must have its origination in needs experienced or anticipated in the course of military operations; and in order that steps shall be taken to meet those needs, requirements must somehow be communicated to the agency in general charge of research.

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Penicillin in the Treatment of Yaws: The high incidence of yaws among the natives of Samoa provides an excellent opportunity for the study of the effectiveness of penicillin in the treatment of this disease. Such an investigation is now being carried out, and a preliminary report of its progress has recently been received by the Bureau. Up to the time the report was made, eighteen cases of primary yaws had been treated. These patients were carefully selected to be certain that the lesion was the initial one for each individual case and that no previous anti-yaws therapy had been administered. Each patient received penicillin 20,000 units intramuscularly, every three hours for eight days, making a total dose of 1,280,000 units. The majority of these patients were children.

In addition, twelve patients with late or tertiary yaws had been treated. Among these were cases of bone yaws, chronic yaw ulcers and so-called "crab yaws." Most of these patients had received considerable therapy with arsenic and bismuth over long periods of time and had not been cured. They were, therefore, a constant source of contagion. These patients received penicillin, 20,000 units intramuscularly, every three hours for twenty-one days. The total amount given was 3,360,000 units in ten cases and 3,200,000 units in two cases.

All of the patients were hospitalized until all lesions had healed. Quantitative Kahn tests and darkfield examinations were carried out before

beginning therapy. The Kahn tests were repeated at intervals of one week during the hospital stay and at variable intervals thereafter. The darkfield examinations were repeated four hours after the start of therapy and then at two-hour intervals until three negative preparations had been obtained. All patients were examined daily while in the hospital, and notes were made as to their progress. After discharge from the hospital, they were seen once a week at first and later at intervals of two or three weeks.

The lesions usually lost their dirty crusts and took on a clean granulating appearance during the first 24 hours. On the second day the granulations seemed slowly to melt away and the lesions became dry. On the third day new epithelium could be seen starting to grow in from the periphery of the lesions. From that point on the rapidity of progress was variable depending in part on the size and type of lesion.

In some of the chronic cases the disappearance of the lesions was retarded by secondary infection, scarring, etc. However, in practically all cases healing was complete within six weeks and in the majority within three weeks.

Darkfield examinations naturally could not be performed in cases of bone yaws. In the other cases the disappearance time of spirochetes from the lesions varied between 8 and 24-1/2 hours, the average for all cases being fifteen hours. Preliminary observations of the blood serology as demonstrated by periodic quantitative Kahn tests indicated a tendency toward early reduction in titer of the positive reaction. However, a much longer time of observation will be necessary before the effect of penicillin treatment on the serology can be determined.

The results of these preliminary studies leave little room for doubt that penicillin is effective in yaws, as well as in syphilis, in producing rapid disappearance of the clinical manifestations of the disease. (Research Project X-378 (Gen. 56); Preliminary report on Study of Penicillin in the Treatment of Yaws, by Capt. J. K. Gordon (MC), USN. The Project was supervised by Lt. Comdr. J. S. Smith (MC), USNR, and Lt. J. L. Reynolds (MC), USNR, under the direction of the senior medical officer of the hospital.)

* *

Evidence is presented that following penicillin treatment there is a tendency toward reduction in titer of the positive quantitative Kahn reaction. It is contemplated that this important investigation will continue, as it will be necessary to follow these and other patients for two to three years to determine the frequency of serological cure and the incidence of clinical and serological relapse.

The eradication of yaws among native populations by means of the arsenicals and bismuth has not been satisfactory. These therapeutic agents bring about, as does penicillin, rapid clinical improvement. However, permanent, including serological, cure of the disease has been achieved only rarely because of the unwillingness of most native patients to carry out, while free of symptoms, the prolonged treatment required to achieve that result. In fact, some public health officers have not considered it desirable to bring about a complete cure of yaws in native populations because of the protection against the acquisition of syphilis offered by the former disease.

If treatment with penicillin for one to three weeks will cure yaws permanently, some of the disadvantages attending its treatment with the arsenicals will be obviated. However, present methods of administering penicillin require that the patient be hospitalized, and thus the use of this drug is not now suitable to programs for the eradication of yaws among large groups. Current research designed to develop substances which, by delaying the absorption of penicillin and thereby prolonging its action, may provide the solution of the problem, making it possible to cure the disease by a short course of treatment in large numbers of ambulatory people.

Meanwhile, for the cure of the individual patient with yaws who can be hospitalized, penicillin seems to be the drug of choice.

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Preparation of Skin Prior to Application of Adhesive Tape: Tincture of benzoin is commonly used as a skin surfacing agent to make adhesive tape stick better. In most instances it produces no irritation of the skin. A few individuals, however, develop marked hyperemia of the skin with some degree of swelling localized in those areas to which tincture of benzoin has been applied. It is therefore advisable, before using it under tape, to test each individual for sensitivity to benzoin by painting a small area of the ventral surface of the forearm with it, especially in cases requiring extensive strapping. The erythema, if any, will be well developed within ten minutes and will subside promptly upon washing off the benzoin with acetone or alcohol. In hot climates, simple drying and de-greasing of the skin with acetone immediately before the application of adhesive tape should permit the tape to establish firm adhesion with the skin without the use of supplementary agents. (Nav. Med. Res. Inst.)

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Recent Developments in the Treatment of Myasthenia Gravis: The demonstration that neostigmine restores muscular power to patients with myasthenia gravis introduced an era of rapid advances in the pharmacological

attack on this disease. The efficacy of neostigmine, ephedrine, guanidine and potassium salts alone or in suitable combinations has been well-established. These drugs restore toward normal the response of muscle to nervous impulses by enhancing the action of acetylcholine, which is presently believed to be an essential agent in neuromuscular transmission. The effect of these drugs has led to the current concept of the nature of myasthenia gravis; that is, a deficiency of the essential acetylcholine at the nerve-endings.

The clinical pictures of myasthenia gravis and mild curare poisoning are indistinguishable. This similarity has suggested the possibility that some circulating substance might be responsible for the malfunction of the neuromuscular apparatus. The source of such a hypothetical circulating substance is unknown. However, pathologists have long noted that some 50 per cent of patients with myasthenia gravis have a demonstrable abnormality of the thymus gland (thymoma or lymphoid hyperplasia). Parenthetically, it is of some interest to note that at least two other diseases, hypoadrenalism and hyperthyroidism, are frequently the cause of profound muscular weakness and are similarly associated with lymphoid hyperplasia of the thymus.

These considerations led Blalock and his associates (J.A.M.A., Nov. 1, '41) to evaluate the effect of total thymectomy on patients with myasthenia gravis in whom no thymic enlargement had been detected by roentgenography. The results in these patients and in additional cases which have been reported in the American and British literature permit certain tentative assumptions regarding the role of the thymus in the pathogenesis of myasthenia gravis. In about one-half of the patients the course of the disease was affected favorably by thymectomy; some of the patients enjoyed a virtual cure; some were enabled to reduce appreciably the maintenance dose of neostigmine and to increase their activity to normal levels; some showed slighter but definite improvement. Other patients, however, have not shown any signs of improvement after thymectomy. The favorable results must be viewed with great caution because myasthenia gravis is characterized by remissions; but the conclusion seems inescapable at this time that certain cases of myasthenia are influenced favorably by thymectomy. There are no clear indications at present which will permit the selection of patients who may be expected to derive benefit from surgical intervention, and, therefore, thymectomy should be reserved for those patients with severe and progressive myasthenia gravis in whom the pharmacological means of treatment are beginning to fail or in whom a tumor of the anterior mediastinum has been demonstrated. (J. L. Lilienthal, Jr.)

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Perforating Wounds of Abdomen; Reduction in Mortality: In the European theater, the case mortality of perforating wounds of the abdomen was 70 per cent in the first World War. In this war, the mortality has been reduced to

25 per cent. These results are due, not to rapidity of transportation to a hospital situated and equipped for definitive surgery, but to moving surgical facilities so close to the front that, to reach them, transportation is not necessary. At such front hospitals, patients are held for seven days after operation or until they may be transported without harm.

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Importance of Debridement of Battle Wounds: In a recent paper Lt. Col. Monroe makes a plea for more adequate debridement of wounds received in battle. To quote:

"In the minds of many surgeons there is no longer any argument that debridement should be accomplished at the earliest practicable moment and, especially in the case of extremities, should be a procedure sufficiently radical to explore the depths of the wound, to remove all devitalized tissue, foreign bodies and detached bone fragments, and to permit adequate drainage."

He offers the following interesting evidence in support of his contention that the earlier and more adequately debridement is done the lower will be the mortality and morbidity rates:

"A resume of one hospital's experience with the battle casualties from two campaigns in the Southwest Pacific is as follows:

"1. The first campaign was of relatively long duration, food supplies were short, there were 1203 casualties, of which 90 per cent were adequately debrided early (4 to 6 hours). Morbidity was low in patients with extensive wounds, and the incidence of bacterial gangrene was 0.66 per cent.

"2. The second campaign was of short duration, food supply was adequate, there were 250 casualties. No debridement of extremity wounds was done. Morbidity was high in patients with extensive wounds, and the incidence of bacterial gangrene was 4 per cent." (Surg., Gynec. & Obst., Nov. '44.)

* *

It is apparent that the interval between wounding and definitive surgery will vary of necessity in different operations, and its length will depend upon the accessibility to the combat area of facilities for major surgery.

In the early days of the war the introduction into military surgery of the sulfonamides led many surgeons into the belief that these compounds would be so effective in the prevention of infection that some compromise could be made with established surgical principles. Further experience in all theaters

of war has not borne out this hope. The sulfonamides systemically administered are very effective in combatting most spreading infections, although they have been disappointing in the case of clostridial infections. The sulfonamides locally applied have failed to reduce the incidence of local infection of wounds in those cases which have received prompt definitive surgery. It is probable that where definitive treatment must be delayed, if they are applied immediately after wounding and therefore before the development of sulfonamide inhibitors in the lesion, they may retard the multiplication of implanted bacteria for a time. The sulfonamides are rapidly rendered ineffective by the presence of pus and are completely ineffective in combatting infection in devitalized tissue.

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Refrigerated Skin Grafts: A very practical and useful procedure has been suggested by Dr. Jerome P. Webster, of the Presbyterian Hospital, New York City, whereby skin for grafting is taken at one operation and refrigerated for use at a later date. (Annals of Surgery, Oct. '44.)

A number of instances are given in the medical literature in which grafts are reported as having survived for varying periods from the time of removal until that of transplantation. In some of the early experiments skin which had been refrigerated for as long as fourteen days was found to survive.

Skin preserved by refrigeration may be of use where regrafting or further grafting is necessary. For example, in the case of a first graft's failure to take, such failure may be apparent at the first dressing of the wound. With refrigerated material readily available the area may be made ready within a few days and the second graft be placed without further major operative procedure. Or in the case of a patient with extensive wounds who is so ill that only a portion of the grafts may be placed at one time, excess skin taken at the time of the first grafting may be applied two or three days later.

Experiments were conducted also using lyophilized grafts, and these were found to be of some value although less satisfactory. There is no question, however, that the lyophilized skin actually persisted as living skin.

The technic of skin refrigeration is simple, and Webster suggests wrapping the grafts in a pliofilm package and then storing in sterile towels. At the Naval Medical Center simple wrapping of grafts in saline gauze and placing in sterile Petri dishes has been successful. Following wrapping, storage in an ordinary refrigerator along with various other biological products has been found entirely satisfactory.

This method of refrigerating skin grafts for later use deserves wider application and may be of considerable aid in extensive grafting problems. (Nav. Hosp. Bethesda, G. V. Webster)

Significance of Transient Hypertension: As a result of analysis of health records of 22,750 Army officers, it has been concluded that: "Transient hypertension of any degree, which is manifested by elevation of either the systolic or the diastolic level, is significant. The indices of significance employed are the later development of sustained hypertension, or retirement or death as a result of cardiovascular-renal diseases. Of particular importance is a transient diastolic pressure above 100 mm. of mercury, regardless of the systolic level. The cases in this group show a relatively high incidence of later sustained hypertension." (Levy, Col. Univ. - OEMcmr-272, CMR Bulletin #14)

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Errors in Blood Groups on Identification Tags: That an error of about five per cent exists in the blood groups as recorded on identification tags of military personnel was pointed out in a previous issue of the Bumed News Letter (Nov. 26, '43). It is considered timely to bring this matter again to the attention of medical officers. The recorded blood group is intended to be used merely as a preliminary screening. As such, it directs the efforts of the medical officer in looking for group-specific and universal "O" donors, thus saving much of the time which would be required if it were necessary to type a larger number of men of unknown group.

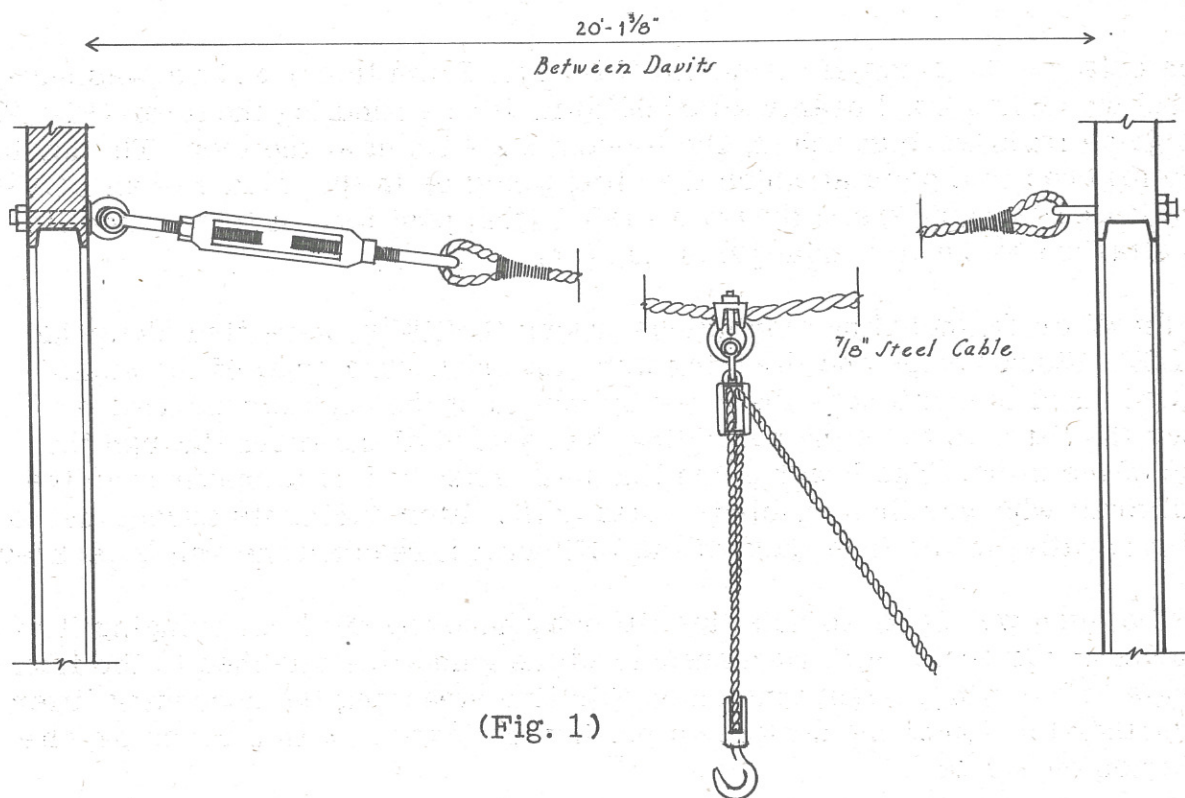
Only in the most extreme circumstances should a transfusion be given without crossmatching. Under such circumstances it is much safer to use pooled group "O" blood than to attempt a group-specific transfusion. The anticipated availability of large quantities of certified "O" blood in the European and Pacific theaters will facilitate this procedure.

If the blood group recorded on identification tags is used only as a preliminary screening and is not accepted as ultimate fact, the advantages to be gained by continued recording of blood groups on identification tags will outweigh the disadvantages. (Nav. Med. School - L. R. Newhouser & S. T. Gibson)

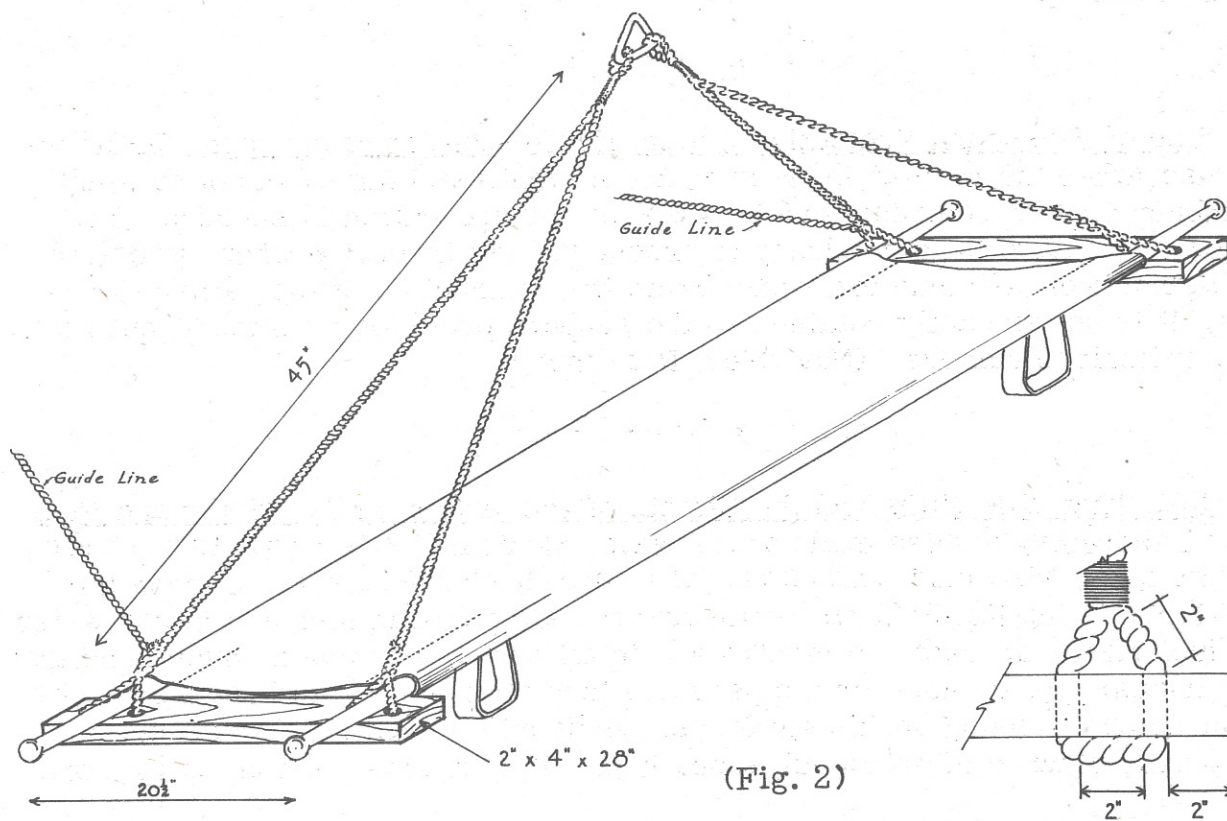
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A Type of Litter Hoist for LST-s: In planning for the evacuation by LST-s of casualties in the recent landing operations in Normandy, it was foreseen that patients would have to be brought aboard from landing craft or amphibious vehicles prior to the completion of unloading. It was necessary, therefore, to provide a means of bringing litter cases over the side under combat conditions when ramp or rail loading was not possible. To meet this problem, the following plan was evolved:

One after davit on each side of the LST was rigged with a jigger (double block above and single block below) secured to the lizard of the strengthening



(Fig. 1)



(Fig. 2)

beam between the arms of the davits (Fig. 1). From this a sling was suspended which had 2 x 4 beams attached to facilitate handling the litter (Fig. 2). Two guide lines were attached, one to each 2 x 4 beam at the loop. The davits were lowered to a point at which the sling would be in the middle of an LCVP, where it was tied alongside, and they were left in that position. A third guide line was attached to the iron triangle of the sling.

Small craft, including amphibious trucks (DUKW's) were tied alongside the LST. Bunk straps and the sling were lowered. The crew of the small craft secured the patient to the litter by means of the bunk straps and attached the litter to the sling by sliding the handles of the litter through the loops of the sling. The lower guide lines were handled by a crewman in the small craft who was thus enabled to steady the litter during its ascent and to hold it parallel to the freeboard of the LST until it reached the ship's deck level.

Two men were able to hoist the litter by handling the line, bringing it to the level of the deck. A third man maneuvered the guide line attached to the iron triangle of the sling, slight tension on this line steadying the ascending litter and further tension at the deck level pulling the litter within reach of the corpsmen on the deck.

Thirty-five per cent of the litter cases received on LST-s in the first ten days of the Normandy landing were handled successfully by this method. (G. B. Dowling)

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Use of Flashburn Protective Cream for Prevention of Sunburn: In emergencies, when the regular issue sunburn preventive ointment is not available, flashburn protective cream can be used for the prevention of sunburn. Its only disadvantage is its tendency to produce slight irritation when applied to the lips as well as some annoyance from the contraction of the rather thick film. It is not as easily retained as the sunburn protective ointment, but is less difficult to remove. (Nav. Med. Res. Inst.)

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Inks That Will Withstand the Effects of Immersion in Sea Water and Fuel Oil: Laboratory studies made at the Naval Medical Research Institute, Bethesda, Maryland, indicate that both the Higgins Carbon Ink and Carter's Ink No. 9131 will withstand the effects of immersion in sea water and fuel oil for at least two months and in all probability much longer, and that both inks are acceptable for dip pens and fountain pens. Both inks have the disadvantage of being unsuitable for use in fountain pens which have not been thoroughly cleaned of previously-used inks. The Higgins Carbon Ink is more

likely to clog fountain pens and therefore to necessitate more frequent cleaning of pen points than the Carter's Ink No. 9131. (N.M.R.I. Projects Nos. 70 & 88)

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Naval Field Medical Photographic Units: On the recommendation of the Surgeon General, two Naval Field Medical Photographic Units were formed late in 1943 and a third was organized in the spring of 1944. Two of the units were dispatched to the Pacific Area where they covered activities with the Marines and on ships and bases of the Navy. The Atlantic Fleet Unit went to the Mediterranean Area and worked with the Army in the Italian Theater before proceeding to one naval base hospital in Africa and another in England.

The two original units were given roving commissions and obtained much material on the handling of casualties, on tropical and exotic diseases, etc. Each unit photographed a group of battle casualties as soon as possible after the men were wounded and followed these same cases throughout all of the stages of treatment and evacuation to the Continental United States. The pictorial record of some of these patients is still being made after eleven months.

The film exposed by Units One and Two is being utilized in the production of a number of releases in the "Medicine in Action" series. "Pacific Enemy Number Two - Malaria", "Typhus in Naples", and "Breakbone Fever - Dengue" have already been released and "Soft Tissue Wounds" is scheduled to appear in December. Future releases will be concerned with such subjects as "Trench Foot", "Chain of Evacuation", "Abdominal Wounds", "Chest Wounds", "Peripheral Nerve Injuries", "Head Wounds", etc.

Unit Number Three has just returned to the United States from a mission aboard one of the naval hospital ships in the Pacific. It is being returned to the Pacific Area for the purpose of obtaining a photographic record of the sanitary conditions encountered by the forces of the Navy and Marine Corps and of the measures instituted to improve those conditions. (Prev. Med. Div.- BuMed - C. C. Clay)

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Mobile Dental Unit: To meet the need for better dental service at many small activities throughout the country where it is impracticable to assign dental officers and to install dental equipment, a motorized dental unit (MDU) has been developed which is a tractor-trailer combination. Heretofore the best dental service that could be made available to these small activities was that furnished by dental officers using portable units during temporary or

additional duty at such stations. Portable equipment is necessarily limited as to amount and kind of service. The new Mobile Dental Unit can bring to small stations which have no dental facilities an improved and adequate dental service which will be nearly as efficient as that which can be provided by any permanent installation.

The trailer which contains the dental facilities and equipment is 33-1/2 feet long, 10-1/2 feet high and 8 feet wide over-all. It has two complete dental operating room installations, including an X-ray unit. There are also a waiting room, a dark room for film development and a locker room. In addition to the strictly dental equipment there are various appliances which increase the efficiency of the dental service such as an air conditioner, a 10-kilowatt generator, two water tanks having a total capacity of 220 gallons and a water heater.

The mobile unit has 3-inch insulation throughout, and its roof is painted a light color to avoid oppressive heat in the summer sunlight.

A temporary activity has been established to train qualified personnel as tractor-trailer drivers and maintenance crews as well as to acquaint the assigned officer and enlisted personnel with the construction and operation of the units. Each unit will have a complement of one Lieutenant Commander (DC), one Lieutenant (DC), two dental technicians, and a motor machinist's mate.

The automobile-mounted dental operative units are being road-tested, and the first completed unit will be in actual operation about the first of the year. (Dental Div. - BuMed. - R. S. Davis)

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Studies in the Etiology of Primary Atypical Pneumonia: The following item presents in abstract form material taken from a report of investigative work conducted by the U. S. Navy Research Unit at the Hospital of the Rockefeller Institute for Medical Research.

Bacteriological studies: Nose and throat cultures yielded the usual variety of bacteria commonly found in the upper respiratory tract of normal persons without striking qualitative or quantitative differences. By mouse inoculation of sputum one or another type of pneumococcus was obtained from 56 per cent of patients. Twenty-seven different types of pneumococcus were isolated, and it is noteworthy that neither Type I nor Type II was obtained. The distribution of pneumococcus types, as well as the number of bacteria present, was similar to that found in the upper respiratory tract of normal persons. B-hemolytic streptococci belonging to four serological

groups were isolated from the sputa of 9 per cent of patients. Hemolytic staphylococci and H. influenzae were frequently isolated. In no instance was evidence obtained which indicated that any of the bacterial species mentioned above were causally related to the illness. All cultures of blood, of pleural fluid and of cerebrospinal fluid remained sterile.

Serological studies: Acute-phase and convalescent sera from patients were tested for the presence of antibodies against a number of filtrable viruses known to be capable of inducing acute respiratory disease: influenza A and B, swine influenza, psittacosis, and lymphocytic choriomeningitis viruses. With the exception of one case, no significant increase in specific antibodies against any of these viruses was demonstrable during convalescence. The evidence indicates that none of these viruses was causally related to the illness under investigation.

It was found that 35 per cent of the patients developed in their sera during early convalescence the capacity to fix complement with a wide variety of unrelated antigens. Similar reactions were not observed with sera from patients with other diseases. This phenomenon seriously complicates the interpretation of complement fixation tests in this syndrome.

Sera from patients were tested for the presence of cold agglutinins against human group "O" erythrocytes. It was found that the sera of only 19 per cent of the patients showed this property. Reports from other laboratories have recorded a much higher incidence of cold hemagglutinins in primary atypical pneumonia.

Etiological studies: In attempts to determine the etiology of primary atypical pneumonia, efforts were directed towards ascertaining the possible relationship to this illness of a variety of infective agents. Three possibilities were investigated: first, that a virus might be causally related to the syndrome; second, that a bacterium might be associated with the illness; and third, that the condition might be induced by mixed infection with both a virus and a bacterium.

Virus investigations: Various specimens of sputa, throat washings, plasmas and suspensions of lungs from fatal cases were inoculated by a variety of routes into numerous animal species, including monkeys, cotton rats, hamsters, rabbits, guinea pigs, white rats, hooded rats, mice and chick embryos. In no instance was evidence obtained which indicated clearly the presence in these specimens of an infective agent transmissible in series in the animal species tested.

It was found that certain specimens, particularly sputa, sometimes induced pulmonary consolidation following primary intranasal inoculation in

either cotton rats or hamsters. However, it was found also that control specimens, particularly suspensions of normal chick embryo, were capable sometimes of inducing similar pulmonary lesions in these species. On microscopic examination of such lesions, extensive areas of pneumonia were found in which the cellular exudate consisted predominantly of erythrocytes, lymphocytes and mononuclear cells. No bacteria, rickettsiae, elementary bodies, or inclusion bodies were found in sections stained by a variety of technics. In no instance were bacteria isolated from the consolidated animal lungs which were considered causally related to the pneumonic process.

The effect of sera from patients with primary atypical pneumonia upon the incidence of pulmonary lesions induced in cotton rats or hamsters by either sputa or normal embryo suspensions was tested. It was found that although acute-phase serum did not affect the incidence of such lesions, convalescent serum reduced the frequency of their development.

These results suggest that in cotton rats and hamsters latent infectious agents normally present in the respiratory tract can be provoked to pathogenic activity by non-specific stimuli. Moreover they raise the possibility that an antigenically similar infective agent may be associated with primary atypical pneumonia. It must be emphasized that much additional investigative work will be required before the validity of this hypothesis can be tested adequately.

Bacterial investigations: Non-hemolytic streptococci, all strains of which belonged to one serological type, were isolated from specimens obtained from patients with primary atypical pneumonia. Interest in this microorganism developed when it was discovered that specific antibodies against the bacterium appeared in the sera of patients during convalescence. For convenience this bacterium has been designated streptococcus "MG."

Lung tissue from eight fatal cases of primary atypical pneumonia has been studied. Streptococcus MG was isolated from six of the lung specimens. Lung tissues from six patients who died of conditions other than primary atypical pneumonia were studied in an identical manner. In no instance was streptococcus MG recovered from these specimens.

Sputa from 91 cases of primary atypical pneumonia have been studied in a similar manner. From 50 of the 91 sputa, streptococcus MG was isolated. All strains isolated either from lung specimens or from sputa of patients with this syndrome were indistinguishable one from the other by all available tests. All strains belonged to one serological type.

Streptococcus MG was recovered from the throats of five normal persons in a group of 50 tested. This finding suggests that this bacterium may not uncommonly be present in the upper respiratory tract of apparently healthy persons.

Serological tests with streptococcus MG have shown that 68.9 per cent of 209 patients with primary atypical pneumonia developed agglutinins against this organism during convalescence. On the other hand, only 1.3 per cent of sera from 75 normal persons and only 5.7 per cent of convalescent sera from 122 patients with a variety of other infectious diseases (acute respiratory infection without pneumonia, psittacosis, pneumococcal pneumonia, influenza A, scarlet fever, tuberculosis, etc.) were found to agglutinate this bacterium. Selected positive sera from patients with primary atypical pneumonia were also tested by the agglutination technic against staphylococci, encapsulated and rough pneumococci, as well as rough H. influenzae. In no instance were results encountered which were similar to those obtained with streptococcus MG.

Precipitins against the capsular polysaccharide of streptococcus MG were demonstrated in the convalescent sera of selected cases of primary atypical pneumonia but were not found in control sera. Moreover, the convalescent sera which had the highest agglutination titers were found to give a positive "Quellung" reaction with streptococcus MG. Capsular swelling also was demonstrable in the presence of homologous immune rabbit serum, and by means of this reaction streptococcus MG has been identified directly in sputa from patients with the disease.

Chemical studies indicate that the capsular polysaccharide is a long-chain nitrogenous sugar which contains phosphorus. Positive cutaneous reactions have been demonstrated following intracutaneous injection of the polysaccharide in certain patients convalescent from primary atypical pneumonia. Similar tests were negative in patients with other infectious diseases. The polysaccharide was found to be highly antigenic for human beings. As little as 10 μ gm. injected intracutaneously stimulated the production of specific agglutinins in all persons tested, and the injection of 100 μ gm. resulted in the development of agglutinin titers as high as or higher than those encountered in the majority of convalescent sera from patients with primary atypical pneumonia. The antibody response induced by injection of the polysaccharide persisted without reduction in titer for at least seven months.

Streptococcus MG was found to be wholly resistant to the action of sulfonamide drugs, but was susceptible to that of penicillin. It was shown to be related antigenically to, but not to be identical with Streptococcus salivarius (Sherman), Type I, and to differ markedly from the latter microorganism in a number of important biological and immunological characteristics. The available evidence indicates that streptococcus MG is not antigenically related to any type-specific pneumococcus or to any of the groups of B-hemolytic streptococci.

Streptococcus MG was avirulent for monkeys, cotton rats, hamsters, mice, rabbits and guinea pigs by all routes of inoculation tested. By means

of protection tests in 6-day chick embryos, it has been possible to demonstrate in the convalescent sera, but not in the acute-phase sera, of patients with primary atypical pneumonia, some protective antibodies against this microorganism.

Evidence has been obtained which indicates that the pneumonia sometimes induced in cotton rats by the inoculation of sputa from patients with primary atypical pneumonia was not the result of infection by streptococcus MG. Consolidated cotton rat lungs did not in a single instance yield this bacterium on culture. Moreover, cultures of streptococcus MG, even when mixed with mucin, did not cause pulmonary consolidation following intranasal inoculation in this species. Furthermore, sera obtained from rats after inoculation with sputa or normal embryo suspensions did not react with streptococcus MG.

In the light of the results obtained so far it seems reasonable to speculate on the possibility that two agents, one presumably a virus and the other a bacterium, may in this disease act in concert to produce an infection different from that which would be produced by either alone. It must be pointed out that this tentative hypothesis is based merely on the available experimental evidence, much of which requires extension and confirmation. (F.L. Horsfall, Jr.)

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The Common Skin Diseases (IX): Drug Eruptions:

Etiology: Many of the commonly used drugs will occasionally produce eruptions in susceptible individuals. All of the standard dermatological texts contain lists of these drugs with descriptions of the eruptions produced.

Clinical Features: The majority of drug eruptions will conform to one of the following clinical types: (1) morbilliform; (2) scarlatiniform; (3) urticarial; (4) hemorrhagic - purpuric; (5) exfoliative (usually caused by heavy metals such as arsenic and gold compounds).

Many of these eruptions appear suddenly, and their appearance may be accompanied by few, if any, symptoms. Such eruptions are due to drug sensitization and are, in fact, allergic reactions. Less commonly, the eruption appears slowly and is accompanied by fever, nausea, vomiting and prostration.

Painful erosions within the mouth may accompany certain of the drug eruptions and may be associated with granulocytopenia. Occasionally the buccal erosions appear coincidently with an erythema multiforme due to drugs (characterized by circumscribed plaque-like lesions on the palms, soles, backs of the hands and forearms, showing peripheral erythema with central purpura, bulla formation or dusky blue discoloration).

The eruptions due to heavy metals may take the form of a serious or fatal exfoliative dermatitis. For this reason, the appearance of any eruption or the complaint of generalized pruritis during arsenical anti-syphilitic therapy should suggest an arsenical drug eruption. In such a case the arsenical therapy should be promptly discontinued until the eruption has been definitely identified.

The sulfonamides commonly produce a relatively mild and evanescent eruption which may closely resemble measles, scarlet fever or erythema multiforme. In patients taking a sulfonamide for the first time, the eruption usually appears during the second week of medication. It should be remembered that the local implantation of sulfonamide crystals or powder may be followed by a generalized eruption in a sensitized patient.

A certain number of drug eruptions will be purpuric. These must be differentiated from the rash of meningococcemia.

Treatment: Identification and elimination of the causative drug is all that is ordinarily necessary. Forced fluids and in some instances saline catharsis will help in the elimination.

Eruptions due to the heavy metals call for special treatment including the use of a high protein and high carbohydrate intake to protect the liver against damage and, in the case of eruptions due to arsenic, BAL should be used additionally. All such cases should be hospitalized at once.

If the symptoms have not been alarming and it is believed that exact identification of the causative drug is important (as in the case of a sulfonamide), it is sometimes justifiable to give a small test dose of the suspected drug after the eruption has completely cleared.

Patch-testing with drugs is without value. Intracutaneous and passive-transfer tests are of questionable help. (J. M. Shelton)

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Venereal Disease Control Reports: Numerous reports are received in the Bureau each week and month dealing specifically with the incidence of venereal disease, attendance at prophylaxis stations, and other details concerning the Venereal Disease Control program. As all activities do not follow this procedure, only a random sampling at best is obtained, usually insufficient for any statistical analysis or comparison.

Concomitant with the expansion of the Navy, the importance of such reports from individual ships and stations has grown less and less. The Bureau

receives from other sources monthly reports which adequately furnish the necessary information.

It is therefore requested that these reports to the Bureau be discontinued. This in no way cancels the monthly communicable disease report required by paragraph 2695, Manual of the Medical Department, or the weekly report from continental shore stations, nor in any way modifies reporting of such information to force, fleet, area or district commanders who have issued specific orders concerning such action. (Prev. Med. Div. - BuMed - W. H. Schwartz)

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Supplemental List of Medical Films: A new catalog of medical films has just been distributed. Copies are available on request to the Bureau. The following new films are now available. (See Bumed News Letter, May 28, '43, Sept. 17, '43 and Mar. 3, '44, for previous lists of films.)

- | | |
|----------|--|
| MN-105a | Deep Sea Diving - Medical and Physical. (Color - 28 mins.): This film explains in non-technical language the physiology of deep sea diving. Compression and decompression are explained in detail. |
| MN-1511a | Many Men at Many Guns (B&W - 20 mins.): This dramatic indoctrination and morale film shows to the young hospital corpsman what training he gets, his duties ashore and afloat and the important role the hospital corpsman plays in the Navy. It should be seen by all Hospital Corps personnel. |
| MN-1511k | Pre-operative Care (11 mins.): The preparation of a patient for operation - both mentally and physically - is depicted. |
| MN-1511s | Surgical Dressings (19 mins.): Demonstrates the technic for assisting a doctor in doing dressings and removing sutures, the technic for handling sterile supplies, and the care and setting up of a good dressing cart. |
| MN-1511v | Giving an Enema (20 mins.): Discusses the two main types of enemata, retention and evacuant, and demonstrates the procedure for giving them as well as the after-care of the patient and equipment. |
| MN-1511w | Catheterizing the Male Patient ("Care of Sick and Injured by Hospital Corpsmen" series - 17 mins.): Demonstrates a few nursing procedures which may be used to induce voiding. |

The method of preparing the patient for catheterization and the technic of catheterization are shown. The physiology and anatomy of the genitourinary tract are illustrated by means of animation.

- MN-1511x Isolation Technic ("Care of Sick and Injured by Hospital Corpsmen" series - 20 mins.): Depicts avenues and means by which infection may be spread. Demonstrates the setting up of an isolation unit, and the technic of putting on and removing an isolation gown, scrubbing hands, care of an isolated patient and terminal disinfection.
- MN-1696 Navy Nurse (B&W - 27 mins.): This dramatic film depicts the duties of a Navy Nurse in a hospital, including instruction of hospital corpsmen and administrative work and shows how a nurse new to the Service becomes oriented to her responsibilities. Primarily for the indoctrination of Navy Nurses this film is of interest to all medical personnel.
- MN-1965 Clinical Malaria (B&W - 28 mins.): This film is of interest to all medical officers. It is a basic teaching film on the clinical aspects of malaria. By a combination of actual photography and animation, the relationship of the life cycle of the malarial parasite in the blood stream to the patient's clinical symptoms is clearly shown. The symptoms, signs and pathological body changes associated with the three common types of infection are depicted.
- MN-2153b Specific Gravity of Healthy Men (Experimental Diving Unit) (B&W - 13 mins.): This film depicts a method of ascertaining the specific gravity of healthy men by means of Archimedes Principle and further relates specific gravity to obesity and body fitness.
- MC-2209 Hypodermic Syringes & Needles, Their Care & Function (Color - 28 mins.): Shows how glass hypodermic syringes are made and how they should be cared for. The methods of giving intracutaneous, subcutaneous, intramuscular and intravenous injections are demonstrated and further explained by animated drawings.
- MN-2454a One a Minute (VD Control Series) (B&W - 14 mins.): This is a dramatic short film designed primarily for the male audience. It points out in theatrical terms that almost all prostitutes and easy women have venereal disease. It should

not be shown as a training film but should be placed on the entertainment program. The district venereal disease officer should be consulted about this one.

- MN-2607 Duties of a Dental Technician (B&W - 24 mins.): This film is primarily for the indoctrination of dental technicians in their various duties. It is of interest to all hospital corpsmen and dental officers.
- MN-2612 Making Sea Water Drinkable (B&W - 13 mins.): Explains the action of sea water upon the human body. Depicts the newly developed desalting filter bag.
- MN-3428a Introduction to Combat Fatigue (B&W - 31 mins.): The medical officer, acting as narrator, explains to neuropsychiatric patients the causes of their condition. This is done by dramatizing all experiences of a typical case. Copies have been distributed to naval hospitals where combat fatigue patients are being treated. It is to be shown only to these patients and then under close supervision of medical officers.
- MN-3428b Introduction to Combat Fatigue (B&W - 31 mins.): This version was designed for showing to all medical department personnel. It differs from MN-3428a only in the leading titles which give instructions as to screening.
- MA-3432 Emergency Care of Air Crew Casualties, Parts I & II (B&W - 55 mins.): Injuries to members of air crews engaged in high altitude combat missions require special first-aid technics. This film shows how such emergencies may be handled.
- MA-3658 Three Cadets (B&W - 22 mins.): A dramatic film which shows how three Air Corps Cadets meet the problem of venereal disease - one uses prophylaxis, another, although he contracts venereal disease, reports promptly for treatment, the third one attempts self-treatment and concealment with disastrous results. This film should be seen by all male naval personnel.
- MN-3689 Corpsman! (B&W - 10 mins.): Depicts the hospital corpsman's duties with Marine forces and the training he undergoes in preparation for these duties. This film is of interest to all hospital corpsmen.
- MN-3726 Medicine in Action (Color - 11 mins.): Beginning Sept. 15, '44, BuMed plans to release a new film each month under the general

title "Medicine in Action." Showing actual field conditions, these films should prove to be a very valuable documentary record, useful in the instruction of all medical personnel.

Release #1 - Pacific Enemy #2 - Malaria - (September)
2 - Typhus in Naples - (October)
3 - Breakbone Fever - Dengue - (November)
4 - Soft Tissue Wounds - (December)

- MN-3732 Medicine Hits the Beach (B&W - 18 mins.): This film depicts the training at an amphibious base of the medical beach party in preparation for amphibious assault. Primarily for the indoctrination of hospital corpsmen and medical officers attached to amphibious forces, it is also of interest to all medical personnel.
- MA-3790 Louse-Borne Diseases (B&W - 18 mins.): This is a non-technical film which points out the importance and dangers of louse infestation. Means of prevention and methods of delousing are demonstrated. It is useful in instruction of all personnel concerning louse-borne diseases and their prevention.
- MA-4106 Meet McGonegal (B&W - 11 mins.): This film shows how a man who has suffered loss of both hands by amputation has been enabled to carry on a normal life through the use of hook-type prostheses. This film should be seen by all amputation cases. All medical officers and hospital corpsmen will also find it interesting and informative.
- MA-4176 Malaria Discipline (B&W - 26 mins.): This film, produced by the Army Air Corps, shows clearly and in detail the personal protective measures each man must take in malarious areas if he is to avoid contracting the disease. It should be seen by all personnel, particularly those about to enter malarious zones.
- MA-4195 Pick-Up (Restricted) (B&W - 36 mins.): This dramatic film, for male personnel only, shows how a soldier contracts gonorrhea from a "pick-up." The film should be seen by all male enlisted personnel as part of their sex hygiene training.
- MC-4374 Trichinosis (B&W - Silent - 20 mins.): This film shows the life cycle of Trichinella and how the parasite may be identified by proper examination of pork and pork products. The necessity for complete cooking of all pork products to prevent human infection is stressed. Of interest to all personnel,

the film should be seen by cooks, commissary stewards, hospital corpsmen, nurses and medical officers.

- MA-4586 Personal Health in the Jungle (B&W - 15 mins.): This film is of interest to all personnel, regardless of rank or rating, who may be entering tropical jungle areas.
- MG-4605 Anopheles Census (B&W - Sound): A basic entomological field procedure in setting up malaria-control projects. Of interest to personnel engaged in malaria control.
- MB-4645 Dynamite: This film depicts the use of dynamite in the preparation of draining ditches as a part of the malaria-control program. Of interest to those charged with the responsibility for malaria-control measures.
- MA-4586 Amputations of the Lower Extremities (Silent - Color, 18 mins.): This Army film shows in detail the operative techniques of various amputations of the lower extremity. (N.B. This film has not been generally distributed. It is available on a loan basis on application to the medical officer in command of any of the following naval hospitals: Philadelphia, Pa., Mare Island, Calif., or Bethesda, Md.
- SN-2778 Clasp Partial Denture Design (B&W - 75 Frames): The various types and the underlying mechanical principles of clasp partial denture is shown and described in detail. Of interest to all dental officers and technicians.

Routine distribution of all films is on a loan basis. Copies of the films are deposited in the Bureau of Personnel Training Aids Sections and Libraries, and in Central Aviation Film Libraries. They are available on request. Requests from ships or outlying stations should be made directly to the Training Aids Libraries. Requests from continental shore stations should be made via the senior medical officer of the cognizant naval district or air training command.

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Delivery of Whole Blood: Transportation by air of whole blood to the advanced Pacific areas was begun on November 16 with a shipment of 160 pints. Daily shipments since then have averaged 100 pints. It is anticipated that by the early part of December it will be possible to send 300 pints. (L. R. Newhouser)

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To: All Ships and Stations.

BUMED-EA-GJS
ET14/A3-1(081-40)

Subj: Reimbursement Covering Hospitalization of Navy Personnel in Public Health Service (Marine) Hospitals and Coast Guard Personnel in Navy Hospitals, Suspension of. 11 Nov 1944

Refs: (a) BuMed circ ltr of 23 Jul 1943; N.D. Bul. Cum. Ed. 1943, p. 480.
(b) BuMed circ ltr of 17 Feb 1944; N.D. Bul. of 29 Feb 1944, 44-222.

1. Public Law 373, 78th Congress, making appropriations for the maintenance and operation of Public Health Service (Marine) Hospitals, etc., for the fiscal year 1945, contains the following provisions:

“this appropriation shall be available for the expenses incurred in furnishing medical and hospital treatment, including dental care, to active duty personnel of the Navy and Marine Corps, and the appropriation under this head for the fiscal year 1944 shall be considered as having been available for such expenses from January 1, 1944.”

2. Pursuant to the authority contained therein an agreement has been entered into with the Public Health Service, similar to the one in effect with the Army (ref. (a)), whereby Navy and Marine Corps personnel and Coast Guard personnel will be provided treatment by the respective Medical Departments of the Navy and Public Health Service without reimbursement, on a reciprocal basis, retroactive to 1 January 1944. This agreement applies to Public Health Service (Marine) Hospitals and other established medical relief facilities of the Public Health Service, but does not include services rendered through the medium of private or contract facilities of that Service. The personnel covered by the agreement includes active-duty personnel of the Navy and Marine Corps, of the Commissioned Corps of the Public Health Service, and of the Coast Guard.

3. Officer personnel of the several services will be required to defray personally the cost of subsistence when hospitalized in a hospital or through a Medical Department unit of the other service, except private or contract facilities of the Public Health Service, which will continue to bill this Bureau direct for hospitalization of Navy patients. Instructions regarding rate, collection, and disposition of charges for subsistence as outlined in paragraph 5 of reference (a) shall be carried out.

4. During the existence of this agreement and until further notice, NavMed Form U reports of hospitalization in Public Health Service (Marine) Hospitals will not be required, nor will there be required the other detailed reports heretofore submitted for the purpose of accomplishing reimbursement of the funds of the respective departments. The reports other than financial required by the Coast Guard are specified in reference (b).

5. The Public Health Service facilities will notify the duty stations of the individual Navy or Marine Corps patients admitted for treatment, giving diagnosis, dates of admission and discharge, and on discharge copy of the clinical history of the case. The duty station of such individual shall see that his health record is maintained and disposed of in accordance with the instructions of paragraph 2213(b), Manual of the Medical Department. --BuMed. Ross T McIntire.

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CIRCULAR LETTER NO. 339-44

NAVY V-12 BULLETIN NO. 275, SUBJECT C

To: All Ships and Stations.

PERS-3634-me
QR/P11-1/V12

Subj: Officer Candidates, USN and USNR, Transferred to
Naval Hospitals - Disposition of.

13 Nov 1944

Ref: (a) BuPers ltr Pers-3634-AS, P16-3/MM, of 31 Jul 1944.
(b) Navy V-12 Bulletin No. 235.

1. In view of the necessity for providing adequate space and facilities in naval hospitals for naval personnel undergoing necessary treatment, reference (a) directed the return to previous duty stations of enlisted men in officer candidate classes V-5, V-7, V-12 and V-12(a) and reserve midshipmen (temporary) who, upon completion of their treatment, are found by medical authority at naval hospitals to be fit for full or limited duty. Subject men found unfit for duty are to be retained at naval hospitals pending disposition by the Bureau of Naval Personnel.

2. The provisions of reference (a) are hereby extended to include enlisted men transferred to naval hospitals from naval academic refresher units (V-5 and V-7).

3. Reports of medical survey will in all cases indicate disposition of subject men pending action of the Bureau of Naval Personnel.

4. In the event that this Bureau, upon review of the recommendation of the Bureau of Medicine and Surgery on the report of medical survey, determines that an officer candidate is to be discharged from the naval service, the medical officer in command of the naval hospital or the commanding officer of the man, as appropriate, is hereby authorized and directed to restore him to his previous classification and rating, if any, prior to effecting his discharge.

--BuPers. L. E. Denfeld.

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To: All Ships and Stations.

BUMED-D-HM
P17-2/MM(032)

Subj: Dental Technicians - Number, Training and
Promotion of.

24 Oct 1944

Ref: (a) Manual of the Medical Department, app. D, Bureau Circ. Ltr. D.
(b) BuPers Manual, arts. D-5239, D-5240.
(c) BuPers Man. Circ. Ltr. 28-44; N.D. Bul. of 30 Apr. 1944, 44-504,
enc. (J).
(d) BuPers Circ. Ltr. 134-44; N.D. Bul. of 15 May 1944, 44-569.
(e) BuPers Circ. Ltr. 214-44; N.D. Bul. of 31 Jul 1944, 44-877.

1. Reference (a) is hereby canceled.

2. It is proposed to maintain the numerical strength of dental technicians at one and one-half for each dental officer for the service as a whole, although individual activities may vary in this respect.

3. Dental technicians at present are classified in three categories, viz, dental technologist, general (designated DGT by BuMed), dental technologist, prosthetic (designated DPT by BuMed), and dental prosthetic technician (given the official designator (DP) by BuPers). The first two classes are in all grades of the Hospital Corps rating structure and are obliged to meet requirements set forth in reference (b). The last class comprises rated men only and the qualifications set forth in reference (c) instead of (b) must be met.

4. Eventually all rated men in dental prosthetic laboratories will be designated (DP), but since this is a new group with its own qualifications, no action will be initiated by this Bureau for the time being respecting the disposition of rated men who show promise but are now unable to meet those qualifications, as it is desired to allow such men reasonable opportunity to acquire the necessary skill and knowledge to meet qualifications in the (DP) designation of the rating now held. Non-rated men in laboratories will be under instruction or designated DPT as in the past.

5. To provide for the training of men in dental fields, accelerated classes of 10 weeks duration for those seeking to obtain the designation dental technologist (general) and classes of 6 months for those seeking to qualify for a prosthetic designation or designator will be organized from time to time in suitably equipped stations.

6. Requests for assignment to such courses should be submitted to the Bureau. Each request should include a statement by a dental officer as to the candidate's aptitude or qualifications for such training. It is the general policy to restrict assignees to the prosthetic course to hospital apprentices qualified as dental

technologist (general), but consideration will be given requests or recommendations in other cases when outstanding reasons are given for such action.

7. Inasmuch as the total number of dental technicians is controlled as noted in paragraph 2 and that number barely meets the needs of the dental service, it is the intention of the Bureau that men with dental-technician qualifications be assigned duty in the dental establishment of the activity to which attached.

8. Promotion of dental technicians, except those with the designator (DP), is covered by reference (d). Rating or promotion of men as pharmacist's mate (DP) is governed by reference (e). In examining men for higher (DP) ratings it is to be noted by reference (c) that the examination for each grade shall include all subjects required of lower grades. --BuMed. Ross T McIntire.

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To: All Ships and Stations. PERS-825-bbs
P1-5(A)
Subj: Crews of Hospital Ships, Special Identification for. 30 Oct 1944
Ref: (a) BuPers Manual, art. A-4007, par. 3.
(b) SecNav ltr serial 371313, 10 4 5, Op13-1A-1ma, of 14 Oct 44 to BuPers..

1. Reference (a) when issued in Change No. 1 BuPers Manual will provide that all personnel of medical, dental, hospital, and nurse corps shall carry at all times a NavPers 546 identification card bearing a red cross stamped in the lower left corner in addition to the date of issue, corps, and rank or rating.

2. Reference (b) directs that military personnel serving as crew members of hospital ships be provided with special identification cards similar to cards furnished personnel referred to in reference (a).

3. In furtherance of the directions in reference (b), members of naval personnel while serving as crew members of hospital ships shall be issued NavPers 546 cards bearing the following additional data:

(a) A red cross stamped in the lower left corner.

(b) The name of the hospital ship to which the individual is attached typed below the photograph.

This card is to be surrendered and replaced by a regular identification card when the individual is transferred to other duty.

4. It shall be the specific responsibility of the commanding officer of a hospital ship that each member of the personnel serving aboard have in his possession the prescribed form of identification card. --BuPers. L. E. Denfeld.

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To: AlStaCon. BUMED-Y-MAR
P2-3/P3-1(104-42)
Subj: Filariasis, Reclassification of Personnel BUPERS-101
with a History of, for Duty without Limitation MARCORPS
as to Area. 1865/35
27 Oct 1944
Ref: (a) Joint ltr BuPers-BuMed, BuMed P2-3/P3-1(104),
BuPers P3-1/P3-2, dated 25 May 1943.
(b) Joint ltr BuPers-BuMed-HdqtrsMarCorps,
BuMed P2-3/P3-1(093), BuPers 101, MarCorps 1515-
110, dated 21 Apr 1944.

1. Ref. (a) states that personnel who acquire filariasis shall be transferred to the nearest U. S. Naval Hospital in the United States at the earliest practicable date, and that they shall not be returned to endemic areas. This general policy was restated in Ref. (b); the endemic areas were defined; and provision was made for those hospitalized, or in a limited duty status, to be examined every six months to determine their physical fitness for full duty.

2. At the present time many men are in a full duty status and performing strenuous work in a satisfactory manner which is believed to indicate that either complete recovery has occurred, or, if the infection is still present, it is no longer active. This evidence warrants a modification of those parts of Ref. (a) and Ref. (b) which prohibit reassignment of personnel who have acquired this disease to areas where filariasis is endemic.

3. After this date, any officer or man with a history of filariasis, whether in a full or limited duty status, may, upon his own request, be examined by a medical officer to determine his physical fitness for any duty without limitations as to area and including that with combatant organizations. In the case of personnel in whom there has been no incapacitating disability attributed to filariasis for a period of three or more months, and in whom there is no evidence of clinical activity or disabling disability on this examination, a note over the signature of the medical officer making the examination shall be entered in the health record to the effect that "name and rate or rank has been examined this date and shows no evidence of clinical activity or disabling disability resulting from filariasis; has been free of incapacitating symptoms for three or more months; and is declared physically fit for assignment to combat training or its equivalent." A report of this finding shall be made to the individual's commanding officer.

4. Personnel who are thus declared physically fit will be assigned, insofar as practicable, to duty with an organization undergoing combat training or training requiring physical exertion equivalent thereto. If an individual is able to complete the prescribed training course without recurrence of disability, the medical officer will enter in the health record a note that "name, rate or

rank has satisfactorily completed combat training or its equivalent and is physically fit for full duty without limitation as to area, in conformity with BuPers, BuMed, MarCorps Joint Letter of 27 October 1944." A report of this finding will be made to the individual's commanding officer. Should an individual be incapable of completing this course of training due to recurrence of symptoms, the medical officer shall report this fact to the individual's commanding officer with the recommendation that he be returned to his former duty status. Such an individual may be subsequently reexamined in accordance with provisions of paragraph 3 above.

5. Officers and men who have been certified as physically fit for full duty without limitation as to area shall be eligible for special training and instruction, for promotion, for appointment, for reenlistment and for all other rights and privileges due an individual in a full duty status.

6. This letter shall be brought to the attention of all personnel concerned.
--BuMed. L. Sheldon, Jr.

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To: MedOfCom, NavHosps (Continental Limits).

BUMED-WM-ERT
L8-2/JJ57(042-43)

Subj: Penicillin Therapy; Report of Results of.

28 Oct 1944

Refs: (a) BuMed ltr BUMED-X-FEW-III, L8-2/JJ57(042-43),
7 Jan 1944 in Bumed News Ltr, Jan 21, 1944, Vol. 3,
No. 2, p. 15.
(b) BuMed ltr BUMED-X-FEW-III, L8-2/JJ57(042-43),
31 May 1944 in Bumed News Ltr, 9 Jun 1944, Vol. 3,
No. 12, p. 32.

1. More than five thousand reports on the use of penicillin in conditions other than gonorrhea and syphilis have been received. This is considered adequate information regarding the effectiveness of penicillin therapy, except in several conditions listed below. Routine reports, therefore, in all other cases as required by paragraph 12 of ref. (a), including reports from those hospitals indicated in ref. (b), shall be discontinued.

2. If any of the below listed diseases are treated with penicillin, reports shall be made on penicillin therapy report forms, NavMed 140:

- | | |
|--------------------------------------|-----------------------------|
| A. Hemolytic Streptococcus Pneumonia | F. All Eye Conditions |
| B. Mycoses | G. Infectious Mononucleosis |
| C. Arthritis (specify type) | H. Yaws |
| D. Meningitis (specify type) | I. Subacute Bacterial |
| E. Gas Gangrene | Endocarditis |

--BuMed. Ross T McIntire.

To: All Commanding Officers, Marine Corps and All Naval Hospitals within the United States. 1500-120
D GK-112-dmaj

Subj: Enlisted Men Classified as Physically Qualified for Limited Duty Only; Policy Regarding Separation from the Service in the Cases of. 17 Oct 1944

Ref: (a) Letter of Instruction No. 683, dated 16 Mar 1944.

1. Many requests for discharge have been received at Headquarters, U. S. Marine Corps, from enlisted men who have become disabled for general service and placed on a limited duty status in accordance with the provisions of reference (a).

2. A request for special order discharge from any enlisted man in the above category will not be considered by Headquarters, U. S. Marine Corps, as it might jeopardize any benefits to which he might be entitled as the result of his physical disability. Therefore, any enlisted man serving in a limited duty status where there is no indication that he will be found physically qualified for full duty within a period of six months or more, who desires discharge, may submit a request to his commanding officer. The commanding officer will have him admitted to the sick list and then brought before a board of medical survey for report and recommendation, as provided for in paragraph 8 of reference (a). It is not necessary that such cases be admitted to naval hospitals incident to submission of the Report of Medical Survey unless there exists a need for hospitalization.

3. At the present time this policy does not include men on limited duty as the result of filariasis or malaria inasmuch as they may become physically qualified for unlimited duty within six months.

--BuMed. Ross T McIntire.

--MarCorps. A. A. Vandegrift.

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To: All Ships and Stations. Op13-1D-mms
Serial 390613

Subj: U. S. Naval Hospital, New River, North Carolina -
Redesignation of. 1 Nov 1944

Ref: (a) SecNav ltr Op13-C-jc, serial 17013, of 20 Jan 1944.

1. The U. S. Naval Hospital, New River, North Carolina, established by reference (a), is hereby redesignated:

U. S. Naval Hospital
Camp Lejeune, North Carolina.

2. Bureaus and offices concerned take necessary action.

--SecNav. James Forrestal.

BUREAU OF MEDICINE AND SURGERY
NAVY DEPARTMENT,
WASHINGTON, D.C.

BuMed News Letter, Vol. 4, No. 12

RESTRICTED

To: All Ships and Stations.

BUMED-Y-OMH
P3-1/P3-2(104)

Subj: Gonorrhea and Chancroid, Sulfonamide Prophylaxis of.

30 Oct 1944

1. The sulfonamides have proved a valuable adjunct to the routine prophylactic procedures used in the prevention of certain venereal diseases. BuMed therefore authorizes with the following provisions the use of sulfathiazole and sulfadiazine as oral prophylaxis against gonorrhea and chancroid:

(a) Such use shall be restricted to those ships and stations where the venereal disease rates exceed 49.0 per thousand per year.

(b) Only sulfathiazole or sulfadiazine shall be used.

(c) The dose of the drug shall be two grams by mouth as soon after exposure as possible. No variation in this dosage is authorized.

(d) This method of prophylaxis is limited to postexposure use only.

(e) The administration of the sulfonamides shall be by Medical Department personnel.

(f) Due regard shall be given to the possibility of sulfonamide sensitivity, idiosyncrasy, and resistance. Frequency of administration of this type of prophylaxis to any given individual shall be controlled by the medical officer.

(g) This type of prophylaxis shall not be utilized in the case of personnel actually engaged in flying.

2. Adoption of this sulfonamide program shall be at the discretion of the medical officer and shall be considered only supplementary to the routine prophylactic procedures. Attention is invited to the fact that sulfonamides give no protection against syphilis. This sulfonamide program shall not be instituted among those personnel who are receiving sulfonamides for the control of upper respiratory diseases.

3. Reports shall be submitted in letter form to BuMed covering every thousand sulfonamide prophylactic administrations and shall contain the number of cases of gonorrhea and chancroid contracted after such prophylaxis.

4. This letter cancels and supersedes all previous letters relative to sulfonamide prophylaxis against gonorrhea and chancroid.

--BuMed. Ross T McIntire.

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